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NEWS 3 FEB 25 CA/CAPLUS - Russian Agency for Patents and Trademarks
(ROSPATENT) added to list of core patent offices covered
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data from INPADOC
NEWS 5 FEB 28 BABS - Current-awareness alerts (SDIs) available
NEWS 6 FEB 28 MEDLINE/LMEDLINE reloaded
NEWS 7 MAR 02 GBFULL: New full-text patent database on STN
NEWS 8 MAR 03 REGISTRY/ZREGISTRY - Sequence annotations enhanced
NEWS 9 MAR 03 MEDLINE file segment of TOXCENTER reloaded
NEWS 10 MAR 22 KOREAPAT now updated monthly; patent information enhanced
NEWS 11 MAR 22 Original IDE display format returns to REGISTRY/ZREGISTRY
NEWS 12 MAR 22 PATDPASPC - New patent database available
NEWS 13 MAR 22 REGISTRY/ZREGISTRY enhanced with experimental property tags
NEWS 14 APR 04 EPFULL enhanced with additional patent information and new
fields
NEWS 15 APR 04 EMBASE - Database reloaded and enhanced

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=> file agricola caplus biosis

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=> s homologous recombination and plant?

L1 2113 HOMOLOGOUS RECOMBINATION AND PLANT?

=> s l1 and transgenic

L2 295 L1 AND TRANSGENIC

=> s l2 and transposase

L3 2 L2 AND TRANSPOSASE

=> dup rem l3

PROCESSING COMPLETED FOR L3

L4 2 DUP REM L3 (0 DUPLICATES REMOVED)

=> d 1-2 ti

L4 ANSWER 1 OF 2 CAPLUS COPYRIGHT 2005 ACS on STN

TI Whole cell engineering by mutagenizing a substantial portion of a starting genome and combining mutations with optional reiteration

L4 ANSWER 2 OF 2 CAPLUS COPYRIGHT 2005 ACS on STN

TI Compositions and methods for targeted gene insertion

=> s l2 and (ds or dissociation)\

MISSING OPERATOR SOCIATION)\

The search profile that was entered contains terms or nested terms that are not separated by a logical operator.

=> s l2 and (ds or dissociation)

L5 4 L2 AND (DS OR DISSOCIATION)

=> dup rem l5

PROCESSING COMPLETED FOR L5

L6 3 DUP REM L5 (1 DUPLICATE REMOVED)

=> d 1-3 ti

L6 ANSWER 1 OF 3 CAPLUS COPYRIGHT 2005 ACS on STN

TI Gene targeting methods and vectors for creating cells which have vector sequences integrated into host cell genome via site-specific **homologous recombination**

L6 ANSWER 2 OF 3 CAPLUS COPYRIGHT 2005 ACS on STN

TI Compositions and methods for targeted gene insertion

L6 ANSWER 3 OF 3 CAPLUS COPYRIGHT 2005 ACS on STN DUPLICATE 1

TI The maize transposable element Ac induces recombination between the donor site and an homologous ectopic sequence

=> s l2 and recombination

L7 295 L2 AND RECOMBINATION

=> del l7 y

=> s l2 and overlap

L7 0 L2 AND OVERLAP

=> s l2 and overlap?

L8 12 L2 AND OVERLAP?

=> dup rem l8

PROCESSING COMPLETED FOR L8

=> d 1-6 ti

L9 ANSWER 1 OF 6 CAPLUS COPYRIGHT 2005 ACS on STN DUPLICATE 1

TI Enhanced **homologous recombination** caused by the non-transcribed spacer of the rDNA in Arabidopsis

L9 ANSWER 2 OF 6 AGRICOLA Compiled and distributed by the National Agricultural Library of the Department of Agriculture of the United States of America. It contains copyrighted materials. All rights reserved. (2005) on STN DUPLICATE 2

TI Intrachromosomal **homologous recombination** in whole **plants**.

L9 ANSWER 3 OF 6 AGRICOLA Compiled and distributed by the National Agricultural Library of the Department of Agriculture of the United States of America. It contains copyrighted materials. All rights reserved. (2005) on STN DUPLICATE 3

TI Stress-induced intrachromosomal recombination in **plant** somatic cells.

L9 ANSWER 4 OF 6 BIOSIS COPYRIGHT (c) 2005 The Thomson Corporation on STN

TI Somatic and germinal recombination of a direct repeat in Arabidopsis.

L9 ANSWER 5 OF 6 CAPLUS COPYRIGHT 2005 ACS on STN DUPLICATE 4

TI Gene targeting in **plants**

L9 ANSWER 6 OF 6 CAPLUS COPYRIGHT 2005 ACS on STN

TI Direct gene transfer to **plants**

=> d ab

L9 ANSWER 1 OF 6 CAPLUS COPYRIGHT 2005 ACS on STN DUPLICATE 1

AB The problem of the low frequency of **homologous recombination** observed in higher **plants** has been approached in several ways. Here, we report a new strategy to enhance **homologous recombination** in Arabidopsis. In Escherichia coli and Saccharomyces cerevisiae, hotspots that enhance **homologous recombination** nearby have been identified in regions close to sites associated with the blocking of DNA replication forks or with intensive transcriptional activity. In yeast, a recombination hotspot (HOT1) was found in a region spanning two non-transcribed spacers (NTS) between rRNA genes (rDNA), which contains both a replication fork barrier (RFB) and the promoter for transcription of the 35S rRNA gene. Since rDNA has a common structure among eukaryotes, we analyzed the effect of the endogenous NTS on homologous mitotic recombination in a higher **plant**. We constructed **transgenic** lines of Arabidopsis containing this NTS and a recombination substrate, in which two 3'- and 5'-deleted uidA (β -glucuronidase) genes with partially **overlapping** sequences are separated by a Hygr gene. Reconstitution of functional uidA genes by **homologous recombination** was monitored by histochem. GUS staining. We found that recombination occurred more frequently in all organs tested in F (Fork block) lines **transgenic** for the NTS than in C (Control) lines without the NTS. The average number of GUS+ spots on leaves in F lines was more than nine-fold higher than in C lines. Furthermore, by genomic Southern anal., post-recombinational mols. were detected in a **transgenic** line, F43, which had an extremely high number of GUS+ blue spots. These results strongly suggest that NTS-dependent enhancement of **homologous recombination** may be a common feature of higher **plants** as well as yeast.

=> d so

L9 ANSWER 1 OF 6 CAPLUS COPYRIGHT 2005 ACS on STN DUPLICATE 1

=> s l9 and transposase
L10 0 L9 AND TRANSPOSASE

=> s l9 and transposon'
MISMATCHED QUOTE 'TRANSPOSON'
Quotation marks (or apostrophes) must be used in pairs,
one before and one after the expression you are setting
off or masking.

=> s l9 and transposon
L11 0 L9 AND TRANSPOSON

=> d 2 ab
L11 HAS NO ANSWERS
'2 ' IS NOT A VALID SEARCH STATUS KEYWORD
Search status keywords:
NONE ---- Display only the number of postings.
STATUS -- Display statistics of the search.
ENTER SEARCH STATUS OPTION (NONE), STATUS, OR ?:ti
'TI' IS NOT A VALID SEARCH STATUS KEYWORD
Search status keywords:
NONE ---- Display only the number of postings.
STATUS -- Display statistics of the search.
ENTER SEARCH STATUS OPTION (NONE), STATUS, OR ?:l9
'L27' IS NOT A VALID SEARCH STATUS KEYWORD
Search status keywords:
NONE ---- Display only the number of postings.
STATUS -- Display statistics of the search.
ENTER SEARCH STATUS OPTION (NONE), STATUS, OR ?:none
L1 2113 SEA HOMOLOGOUS RECOMBINATION AND PLANT?
L2 295 SEA L1 AND TRANSGENIC
L8 12 SEA L2 AND OVERLAP?
L9 6 DUP REM L8 (6 DUPLICATES REMOVED)
L11 0 SEA L9 AND TRANSPOSON

=> d l9 2 ab

L9 ANSWER 2 OF 6 AGRICOLA Compiled and distributed by the National
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of America. It contains copyrighted materials. All rights reserved.
(2005) on STN DUPLICATE 2
AB A system to assay intrachromosomal **homologous**
recombination during the complete life-cycle of a whole higher
eukaryote was set up. Arabidopsis thaliana **plants** were
transformed with a recombination substrate carrying a non-selectable and
quantitatively detectable marker gene. The recombination substrates
contain two **overlapping**, non-functional deletion mutants of a
chimeric beta-glucuronidase (uidA) gene. Upon recombination, as proven
by Southern blot analysis, a functional gene is restored and its product
can be detected by histochemical staining. Therefore, cells in which
recombination events occurred, and their progeny, can be precisely
localized in the whole **plant**. Recombination was observed in
all **plant** organs examined, from the seed stage until the
flowering stage of somatic **plant** development. Meristematic
recombination events revealed cell lineage patterns. Overall
recombination frequencies typically were in the range 10(-6)-10(-7)
events/genome. Recombination frequencies were found to differ in different
organs of particular **transgenic** lines.

=> d l9 2 so

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(2005) on STN

DUPLICATE 2

SO The EMBO journal, Jan 15, 1994. Vol. 13, No. 2. p. 484-489

Publisher: Oxford, U.K. : Oxford University Press.

CODEN: EMJODG; ISSN: 0261-4189

=> d 19 3 ab

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(2005) on STN

DUPLICATE 3

AB Levels of induced **homologous recombination** between chromosomal repeats in **plant** somatic cells were examined. **Transgenic plants** of *Nicotiana tabacum* hemi- or homozygous for pairs of deletion derivatives of the neomycin phosphotransferase (nptII) marker gene integrated at a single genomic locus were produced. **Homologous recombination** within the **overlapping** parts of the nptII gene restored the function and the resulting kanamycin resistance was used for scoring recombination frequency. The recombination events were confirmed by the appearance of a characteristic 1245-base-pair EcoRV fragment detected in all kanamycin-resistant clones tested. The rate of spontaneous recombination was found to be related to the copy number of recombination substrates and was 9×10^{-5} and 19×10^{-5} for hemi- and homozygote strains, respectively. Ionizing radiation, mitomycin C, and heat shock markedly increased the frequency of intrachromosomal recombination. Low doses of x-rays (1.25 Gy) enhanced the relative recombination frequency to approximately twice the spontaneous value. The presence of mitomycin C increased the frequency of recombination 9-fold and exposure to an elevated temperature (50 degrees C) increased it 6.5-fold. The x-ray and heat shock treatments reduced cell viability to 53% and 8%, respectively. Mitomycin C treatment had no effect on cell survival.

=> d 19 3 so

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(2005) on STN

DUPLICATE 3

SO Proceedings of the National Academy of Sciences of the United States of America, Jan 15, 1993. Vol. 90, No. 2. p. 422-426

Publisher: Washington, D.C. : The Academy.

CODEN: PNASA6; ISSN: 0027-8424

=> d 19 4 abv

'ABV' IS NOT A VALID FORMAT

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L9 ANSWER 4 OF 6 BIOSIS COPYRIGHT (c) 2005 The Thomson Corporation on STN

AB **Homologous recombination** between a pair of directly repeated transgenes was studied in *Arabidopsis*. The test construct included two different internal, non-**overlapping** deletion alleles of npt (neomycin phosphotransferase) flanking an active HPT (hygromycin phosphotransferase) gene. This construct was introduced into *Arabidopsis* by agrobacterium-mediated transformation with selection for resistance to hygromycin, and two independent single-insert lines were analyzed. Selection for active NPT by resistance to kanamycin gave both fully and partly (chimeric) recombinant seedlings. Rates for one **transgenic** line were estimated at 1.2×10^{-5} events per

division for germinal and gt 10-6 events per division for somatic recombination, a much smaller difference than between meiotic and mitotic recombination in yeast. Southern analysis showed that recombinants could be formed by either crossing over or gene conversion. A surprisingly high fraction (at least 2/17) of the recombinants, however, appeared to result from the concerted action of two or more independent simple events. Some evolutionary implications are discussed.

=> d 19 4 so

L9 ANSWER 4 OF 6 BIOSIS COPYRIGHT (c) 2005 The Thomson Corporation on STN
SO Genetics, (1992) Vol. 132, No. 2, pp. 553-566.
CODEN: GENTAE. ISSN: 0016-6731.

=> d 19 5 ab

L9 ANSWER 5 OF 6 CAPLUS COPYRIGHT 2005 ACS on STN DUPLICATE 4
AB Although the generation of **transgenic plants** is now routine, the integration of foreign genetic information has so far been at random sites in the genome. Evidence is presented for directed integration into a predicted location in the host **plant** genome. Protoplasts of **transgenic** tobacco (*Nicotiana tabacum*) **plants** carrying copies of a partial, non-functional drug-resistance gene in the nuclear DNA were used as recipients for DNA mols. containing the missing part of the gene. Mol. and genetic data confirm the integration of the foreign DNA through **homologous recombination** within **overlapping** parts of the protein-coding region, resulting in the formation of an active gene in the host chromosome. This approach is referred to as gene targeting. The gene targeting frequency (the number of drug-resistant clones resulting from gene correction compared to the number of resistant clones from parallel expts. with a similar non-interrupted hybrid gene) was 0.5-4.2 + 10⁻⁴. These expts. demonstrate the possibility of producing **transgenic plants** with desired modifications to a specific nuclear gene.

=> d 19 5 so

L9 ANSWER 5 OF 6 CAPLUS COPYRIGHT 2005 ACS on STN DUPLICATE 4
SO EMBO Journal (1988), 7(13), 4021-6
CODEN: EMJODG; ISSN: 0261-4189

=> d 19 6 ab

L9 ANSWER 6 OF 6 CAPLUS COPYRIGHT 2005 ACS on STN
AB A review with 14 refs. Gene transfer by biol. vectors is limited by the restricted host range of a given vector. A vector-independent method for gene transfer has been developed and exploited. Incubation of protoplast with genes under the control of **plant** gene expression signals leads to high frequencies of stable integrative transformation. The foreign gene is transmitted to sexual offspring and is inherited according to Mendelian laws. The integration of the foreign gene occurs at random sites; in more than 77% of primary **transgenic plants** studied this was at one locus, but integration at two, three, and more independent or linked loci has also been found, as well as cases indicating maternal inheritance. In the majority of **transgenic plants** analyzed, the foreign gene is absolutely stable for over eight sexual generations and for nearly three years without any selective pressure. However, **transgenic plants** expressing various degrees of instability or loss of the foreign gene have also been found. Transformation frequency can reach values of up to 10% of non-selected protoplast-derived clones, independent of which of two optimized methods is used. one is a combination of electroporation and polyethylene glycol treatment, the other a sequential treatment with

magnesium ions and polyethylene glycol. The transformation frequency is, however, also species and genotype dependent. The high levels achieved with *Nicotiana tabacum* SR1 were never reached with *N. plumbaginifolia* or *Petunia hybrida*. Direct gene transfer is, apparently, possible with protoplasts from any **plant** species. Treatment with mixts. of selectable and non selectable genes led to co-transformation rates of up to 88%. Treatment of protoplasts with sheared or partially digested total genomic DNA from a **plant** carrying one copy of a dominant, selectable marker gene led to the transfer, integration, and expression of this gene. In situ hybridization of radioactively labeled probes of the foreign gene to metaphase chromosomes could be used to visualize the location of the gene. 5' And 3' deletions of a selectable gene with **overlapping** stretches of homol. have been used to study **homologous recombination** within **plant** cells. Stable integration of non-functional 5' deletions of the same gene into the host genome and subsequent transformation with complementing 3' deletions were used to demonstrate gene targeting in **plants**. Microinjection of a marker gene into microspore-derived proembryos produced **transgenic plants** in *Brassica napus*.

=> d 19 6 so

L9 ANSWER 6 OF 6 CAPLUS COPYRIGHT 2005 ACS on STN
 SO Ciba Foundation Symposium (1988), 137(Appl. Plant Cell Tissue Cult.),
 144-62
 CODEN: CIBSB4; ISSN: 0300-5208

=> s 12 and gus
 L12 24 L2 AND GUS

=> dup rem l12
 PROCESSING COMPLETED FOR L12
 L13 14 DUP REM L12 (10 DUPLICATES REMOVED)

=> d 1-10 ti

L13 ANSWER 1 OF 14 CAPLUS COPYRIGHT 2005 ACS on STN DUPLICATE 1
 TI Luciferase-based **transgenic** recombination assay is more
 sensitive than β -glucuronidase-based

L13 ANSWER 2 OF 14 BIOSIS COPYRIGHT (c) 2005 The Thomson Corporation on STN
 TI Cadmium induces DNA damage in tobacco roots, but no DNA damage, somatic
 mutations or **homologous recombination** in tobacco
 leaves.

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 of America. It contains copyrighted materials. All rights reserved.
 (2005) on STN DUPLICATE 2
 TI Different pathways of **homologous recombination** are
 used for the repair of double-strand breaks within tandemly arranged
 sequences in the **plant** genome.

L13 ANSWER 4 OF 14 BIOSIS COPYRIGHT (c) 2005 The Thomson Corporation on STN
 TI Increasing the transient expression of **GUS** gene in *Porphyra*
yezoensis by 18S rDNA targeted **homologous recombination**

L13 ANSWER 5 OF 14 CAPLUS COPYRIGHT 2005 ACS on STN
 TI Genotoxicity of 2,4-D and dicamba revealed by **transgenic**
Arabidopsis thaliana **plants** harboring recombination and point
 mutation markers

L13 ANSWER 6 OF 14 CAPLUS COPYRIGHT 2005 ACS on STN
 TI Method for transforming gene into **plant** without any selective
 marker

L13 ANSWER 7 OF 14 CAPLUS COPYRIGHT 2005 ACS on STN DUPLICATE 3

TI A sensitive **transgenic plant** system to detect toxic inorganic compounds in the environment

L13 ANSWER 8 OF 14 CAPLUS COPYRIGHT 2005 ACS on STN DUPLICATE 4

TI Enhanced **homologous recombination** caused by the non-transcribed spacer of the rDNA in Arabidopsis

L13 ANSWER 9 OF 14 AGRICOLA Compiled and distributed by the National Agricultural Library of the Department of Agriculture of the United States of America. It contains copyrighted materials. All rights reserved. (2005) on STN DUPLICATE 5

TI Meiotic stability of transgene expression is unaffected by flanking matrix-associated regions.

L13 ANSWER 10 OF 14 CAPLUS COPYRIGHT 2005 ACS on STN DUPLICATE 6

TI The maize transposable element Ac induces recombination between the donor site and an homologous ectopic sequence

=> d ab

L13 ANSWER 1 OF 14 CAPLUS COPYRIGHT 2005 ACS on STN DUPLICATE 1

AB Study of the DNA repair and genome stability in **plants** is directly dependent on the availability of an easy, inexpensive, and reliable assay. Marker gene-based **homologous recombination** (HR) assays were introduced more than a decade ago and have been intensively used ever since. Here, we compared several **transgenic** Arabidopsis and tobacco lines that carried in their genome the luciferase (LUC) or the β -glucuronidase (uidA or **GUS**) substrates for HR. The average recombination frequency detected with the luciferase transgene was nearly 9.0-fold higher in Arabidopsis and 12.4-fold higher in tobacco **plants**. Importantly, both transgenes were under the control of 35S promoter and had similar expression levels throughout the **plants**. Irradiation with UVC increased the HR frequency similarly in both transgenes. The actual difference in the frequency of HR in Arabidopsis and tobacco possibly results from differing sensitivity to detection of transgene activity. Thus, we could suggest that luciferase recombination assay, due to its higher sensitivity, should be the assay of choice when **plant** genome stability is studied.

=> d so

L13 ANSWER 1 OF 14 CAPLUS COPYRIGHT 2005 ACS on STN DUPLICATE 1

SO Mutation Research (2004), 559(1-2), 189-197
CODEN: MUREAV; ISSN: 0027-5107

=> d 3 ab

L13 ANSWER 3 OF 14 AGRICOLA Compiled and distributed by the National Agricultural Library of the Department of Agriculture of the United States of America. It contains copyrighted materials. All rights reserved. (2005) on STN DUPLICATE 2

AB Different DNA repair pathways that use homologous sequences in close proximity to genomic double-strand breaks (DSBs) result in either an internal deletion or a gene conversion. We determined the efficiency of these pathways in somatic **plant** cells of **transgenic** Arabidopsis lines by monitoring the restoration of the (beta)-glucuronidase (**GUS**) marker gene. The transgenes contain a recognition site for the restriction endonuclease I-SceI either between direct **GUS** repeats to detect deletion formation (DGU.US), or within the **GUS** gene to detect gene conversion using a nearby donor sequence in direct or inverted orientation (DU.**GUS** and IU.**GUS**). Without expression of I-SceI, the frequency of

homologous recombination (HR) was low and similar for all three constructs. By crossing the different lines with an I-SceI expressing line, DSB repair was induced, and resulted in one to two orders of magnitude higher recombination frequency. The frequencies obtained with the DGU.US construct were about five times higher than those obtained with DU.**GUS** and IU.**GUS**, irrespective of the orientation of the donor sequence. Our results indicate that recombination associated with deletions is the most efficient pathway of homologous DSB repair in **plants**. However, DSB-induced gene conversion seems to be frequent enough to play a significant role in the evolution of tandemly arranged gene families like resistance genes.

=> d 3 so

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(2005) on STN DUPLICATE 2
- SO Plant journal, 2003 Sept. Vol. 35, no. 5 p. 604-612
ISSN: 0960-7412

=> d 4 ab

- L13 ANSWER 4 OF 14 BIOSIS COPYRIGHT (c) 2005 The Thomson Corporation on STN
- AB In order to test whether 18S rDNA can influence positively **GUS** gene transient expression in the red alga *Porphyra yezoensis*, a targeting vector pQD-**GUS** was constructed containing a portion of the 18S rDNA of *P. yezoensis* and transformed it into the same strain protoplasts. The results showed that **GUS** protein activity was increased markedly with pQD-**GUS** compared to the parent pBS-**GUS**. It is suggested that this system can be used to enhance the expression of exogenous genes in **transgenic** *P. yezoensis*.

=> s ((peterson, t?) or (peterson t?))/au

- L14 1141 ((PETERSON, T?) OR (PETERSON T?))/AU

=> s l14 and homologous recombination

- L15 9 L14 AND HOMOLOGOUS RECOMBINATION

=> dup rem l15

PROCESSING COMPLETED FOR L15

- L16 3 DUP REM L15 (6 DUPLICATES REMOVED)

=> d 1-3 ti

- L16 ANSWER 1 OF 3 AGRICOLA Compiled and distributed by the National Agricultural Library of the Department of Agriculture of the United States of America. It contains copyrighted materials. All rights reserved.
(2005) on STN DUPLICATE 1
- TI Ac insertion site affects the frequency of transposon-induced **homologous recombination** at the maize *pl* locus.
- L16 ANSWER 2 OF 3 AGRICOLA Compiled and distributed by the National Agricultural Library of the Department of Agriculture of the United States of America. It contains copyrighted materials. All rights reserved.
(2005) on STN DUPLICATE 2
- TI Intrachromosomal **homologous recombination** in *Arabidopsis* induced by a maize transposon.
- L16 ANSWER 3 OF 3 AGRICOLA Compiled and distributed by the National Agricultural Library of the Department of Agriculture of the United States of America. It contains copyrighted materials. All rights reserved.
(2005) on STN DUPLICATE 3
- TI Ac induces **homologous recombination** at the maize *P* locus.

=> d ab

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(2005) on STN DUPLICATE 1

=> d so

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(2005) on STN DUPLICATE 1
- SO Genetics, Dec 2000. Vol. 156, No. 4. p. 2007-2017
Publisher: Bethesda, Md. : Genetics Society of America.
CODEN: GENTAE; ISSN: 0016-6731

=> d 2 ab

- L16 ANSWER 2 OF 3 AGRICOLA Compiled and distributed by the National Agricultural Library of the Department of Agriculture of the United States of America. It contains copyrighted materials. All rights reserved.
(2005) on STN DUPLICATE 2

=> d 2 so

- L16 ANSWER 2 OF 3 AGRICOLA Compiled and distributed by the National Agricultural Library of the Department of Agriculture of the United States of America. It contains copyrighted materials. All rights reserved.
(2005) on STN DUPLICATE 2
- SO Molecular & general genetics : MGG, Feb 2000. Vol. 263, No. 1. p. 22-29
Publisher: Berlin, Germany : Springer-Verlag Berlin.
CODEN: MGGEAE; ISSN: 0026-8925

=> d 3 ab

- L16 ANSWER 3 OF 3 AGRICOLA Compiled and distributed by the National Agricultural Library of the Department of Agriculture of the United States of America. It contains copyrighted materials. All rights reserved.
(2005) on STN DUPLICATE 3
- AB The maize P gene conditions red phlobaphene pigmentation to the pericarp and cob. Starting from two unstable P alleles which carry insertions of the transposable element Ac, we have derived 51 P null alleles; 47 of the 51 null alleles have a 17-kb deletion which removes the 4.5-kb Ac element and 12.5 kb of P sequences flanking both sides of Ac. The deletion endpoints lie within two 5.2-kb homologous direct repeats which flank the P gene. A P allele which contains the direct repeats, but does not have an Ac insertion between the direct repeats, shows very little sporophytic or gametophytic instability. The apparent frequency of sporophytic mutations was not increased when Ac was introduced in trans. Southern analysis of DNA prepared from the pericarp tissue demonstrates that the deletions can occur premeiotically, in the somatic cells during development of the pericarp. Evidence is presented that the deletions occurred by **homologous recombination** between the two direct repeats, and that the presence of an Ac element at the P locus is associated with the recombination/deletion. These results add another aspect to the spectrum of activities of Ac: the destabilization of flanking direct repeat sequences.

=> d 3 so

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(2005) on STN DUPLICATE 3
SO Genetics, May 1991. Vol. 128, No. 1. p. 163-173
Publisher: Baltimore, Md. : Genetics Society of America.
CODEN: GENTAE; ISSN: 0016-6731

=> s ((xiao y?) or (xiao, y?))/au
L17 3525 ((XIAO Y?) OR (XIAO, Y?))/AU

=> s l17 and homologous recombination
L18 11 L17 AND HOMOLOGOUS RECOMBINATION

=> dup rem l18
PROCESSING COMPLETED FOR L18
L19 5 DUP REM L18 (6 DUPLICATES REMOVED)

=> d 1-5 ti

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(2005) on STN DUPLICATE 1

TI Ac insertion site affects the frequency of transposon-induced
homologous recombination at the maize pl locus.

L19 ANSWER 2 OF 5 AGRICOLA Compiled and distributed by the National
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of America. It contains copyrighted materials. All rights reserved.
(2005) on STN DUPLICATE 2

TI Intrachromosomal **homologous recombination** in
Arabidopsis induced by a maize transposon.

L19 ANSWER 3 OF 5 CAPLUS COPYRIGHT 2005 ACS on STN
TI Transposon-induced **homologous recombination** at the
maize P locus and in transgenic Arabidopsis

L19 ANSWER 4 OF 5 CAPLUS COPYRIGHT 2005 ACS on STN DUPLICATE 3
TI Conditional gene targeted deletion by Cre recombinase demonstrates the
requirement for the double-strand break repair Mre11 protein in murine
embryonic stem cells

L19 ANSWER 5 OF 5 CAPLUS COPYRIGHT 2005 ACS on STN DUPLICATE 4
TI Gene targeting of X chromosome-linked chronic granulomatous disease locus
in a human myeloid leukemia cell line and rescue by expression of
recombinant gp91phox

=> d 3 ab

L19 ANSWER 3 OF 5 CAPLUS COPYRIGHT 2005 ACS on STN
AB Unavailable

=> d 3 so

L19 ANSWER 3 OF 5 CAPLUS COPYRIGHT 2005 ACS on STN
SO (1999) 107 pp. Avail.: UMI, Order No. DA9924780
From: Diss. Abstr. Int., B 1999, 60(4), 1420

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DATE: Thursday, April 14, 2005

Hide?	Set Name	Query	Hit Count
		<i>DB=PGPB,USPT; PLUR=YES; OP=ADJ</i>	
<input type="checkbox"/>	L12	L11 and (dissociation or ds)	172
<input type="checkbox"/>	L11	L10 and transposase	176
<input type="checkbox"/>	L10	l3 and overlap\$	7152
<input type="checkbox"/>	L9	L8 and flank	153
<input type="checkbox"/>	L8	L7 and maize	277
<input type="checkbox"/>	L7	L6 and overlap	642
<input type="checkbox"/>	L6	L5 and gus	1490
<input type="checkbox"/>	L5	L4 and (activator or ac)	7025
<input type="checkbox"/>	L4	L3 and (ds or dissociation)	10668
<input type="checkbox"/>	L3	L2 and transgenic	10764
<input type="checkbox"/>	L2	homologous recombination and plant	13621
<input type="checkbox"/>	L1	(recombination and plant) [ti]	21

END OF SEARCH HISTORY